

# BRIEF PASSENGER CAR DATA

—1955—

CARROLL NED BEAM  
R. F. D. 2  
CHERRYVILLE, N. C.



ETHYL CORPORATION



# BRIEF PASSENGER CAR DATA

1955

## ETHYL CORPORATION

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## NOTICE

The specifications and adjustments contained in this booklet have been compiled by the Research Laboratories of the Ethyl Corporation from information supplied by manufacturers of motor cars, ignition apparatus, spark plugs, etc. None of this information represents the results of tests at the Research Laboratories of the Ethyl Corporation.

This information covers the essential characteristics, in ready reference form, of the 1955 passenger car models. It is correct at date of publication, but changes may be made from time to time by motor car manufacturers.

Data on horsepower, torque, BMEP, etc., are that given by the manufacturer. Methods and technique of testing differ in various engineering departments, so these data are frequently not comparable for different makes of cars.

## GENERAL NOTES

### Valves

Valve tappet clearances are extremely important. Frequent checking of valve tappet clearances will add materially to the proper functioning and long life of valves.

### Spark Plugs

The spark plug installed and recommended by the factory is shown first in the specifications with the corresponding AC, Auto-Lite or Champion spark plug shown as an alternate. These plugs are designed for average driving conditions. For heavy duty or high speed driving, it may be necessary to use a colder plug in order to obtain satisfactory spark plug life. The necessity for a colder plug is indicated by rapid electrode wear and, in extreme cases, splitting and cracking away of the insulator.

It is sometimes necessary to change to a plug which is hotter than the factory equipment plug for very light service, especially in metropolitan areas. If an engine is not pumping oil and the ignition system is in good condition but the spark plug consistently fouls — the need for a hotter plug is indicated. Caution should be exercised in using hotter than standard plugs as they are likely to cause preignition if the vehicle is subjected to high speed driving.

Periodic cleaning of spark plugs by means of an efficient spark plug cleaner is often advantageous.

Spark plug gaps should be set and maintained at factory setting. Pitted breaker points should be cleaned and, if badly pitted, replaced. Incorrectly set breaker points will affect ignition timing and ignition output.

### Ignition Timing

Ignition timing is given in crankshaft degrees and is factory setting. Almost all distributors are provided with some type of adjustment enabling the ignition timing to be reset without disturbing the calibration of the distributor advance mechanism. Retarded ignition timing will eliminate or reduce detonation but will result in decreased performance and fuel economy. Also, in most cases, an ignition setting slightly in advance of the factory setting will result in additional performance and economy, although such an ignition setting will require a fuel of higher antiknock value than the standard setting.

### Carburetors

Carburetors should not be adjusted or jets changed except by qualified mechanics. Correct fuel (or float) levels are extremely important to satisfactory performance and fuel economy — factory specifications should be strictly maintained.

# LIST OF ABBREVIATIONS

AA .....	Aluminum Alloy (cylinder heads & pistons)
AC .....	AC Spark Plug Division, GMC
Adv .....	Advance
AI .....	Aluminum Industries (valves)
AL .....	The Electric Auto-Lite Company
AMA .....	Automobile Manufacturers Association
ATC .....	After Top Center
BTC .....	Before Top Center
Bmep .....	Brake mean effective pressure
C .....	Cold (valve adjustment)
Car .....	Carter (carburetors)
Centrif .....	Centrifugal
Champ .....	Champion Spark Plug Company
Clr .....	Clearance
CNS .....	Chrome Nickel Steel
DD .....	Downdraft
Deg .....	Degrees
DR .....	Delco-Remy Division, GMC
Eng .....	Engine
Eqpt .....	Equipment
Exh .....	Exhaust
F .....	F-head
H .....	Hot (valve adjustment)
HP .....	Horsepower
Hyd Lifters .....	Hydraulic Lifters
I .....	In-head (overhead valves)
Int .....	Intake
L .....	L-head
Max .....	Maximum
No. Cyl .....	Number of Cylinders
OD .....	Overdrive
Recm Press .....	Recommended Pressure (tires)
RP .....	Rochester Products (carburetors)
SD .....	Side Draft
Sil .....	Silichrome
Sgl .....	Single
Std .....	Standard
Strom .....	Stromberg Carburetor Company
TDC .....	Top Dead Center
Trans .....	Transmission
Vac .....	Vacuum



SUMMARY OF CHARACTERISTICS  
1955 UNITED STATES PASSENGER CARS  
Specifications for four-door sedans

	<u>1954</u>	<u>1955</u>	<u>Change</u>
Number of Makes.....	19	19	....
Number of Models.....	55	53	-2

ENGINE CHARACTERISTICS:

Average Standard Compression Ratio.....	7.64	7.96	+ 0.32
Highest Standard Compression Ratio.....	8.70	9.00	+ 0.30
Lowest Standard Compression Ratio.....	6.80	7.20	+ 0.40
Average Displacement, Cubic Inches.....	267.1	270.7	+ 3.6
Average Maximum Brake Horsepower.....	150.8	173.1	+ 22.3
Average RPM at Maximum Horsepower.....	4015	4279	+ 264
Average Horsepower Per Cubic Inch.....	0.555	0.627	+ 0.072
Average Brake Mean Effective Pressure, PSI...	133.7	140.6	+ 6.9
Maximum Horsepower Per Cubic Inch.....	0.709	0.755	+ 0.046
Minimum Horsepower Per Cubic Inch.....	0.449	0.460	+ 0.011
Average lb/HP—6 Passenger Sedan.....	24.88	22.05	-2.83

Rated Horsepower With  
Standard Compression Ratio:

	<u>Number of Models</u>	
Under 75 .....	1	2 + 1
75-99 .....	5	2 - 3
100-149 .....	21	13 - 8
150-199 .....	15	18 + 3
200-249 .....	11	11 ....
249-300 .....	0	7 + 7

Piston Materials:

	<u>Number of Models</u>	
Aluminum Alloy .....	53	53 ....
Cast Iron or Steel Alloy .....	2	0 - 2

See Curve on Page 38

# BUICK

CAR MODEL	Special Series 40 Synchromesh	Special Series 40 Dynaflow
<b>ENGINE</b>		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	3.625 x 3.2	3.625 x 3.2
Displacement (cu in) .....	264.0	264.0
AMA Horsepower .....	42.05	42.05
Max Horsepower @ rpm .....	NA(1)	188 @ 4800
Max Torque, lb-ft @ rpm .....	NA(1)	256 @ 2400
Max bmep, lb/sq in .....	NA(1)	146.2
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.5	8.4
Piston Material .....	AA	AA
Bearing Material .....	Rods Moraine 400 Alum; Mains Durex 100A	
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	AC 44-5	AC 44-5
Alternate .....	AL A5 or AR5, Champ J-8	
Spark Plug Gap .....	.030" to .035"	
Firing Order .....	1-2-7-8-4-5-6-3	
Distributor—Make and Model...	Delco-Remy 1110849	
Breaker Gap .....	.0125" to .0175"	
Cam Angle .....		
Timing—Crankshaft Degrees ...	5° BTC	5° BTC
Adv Deg—Centrif—Vac.....	24-1/2—19-1/2	24-1/2—19-1/2
Adv Begins—Ends—Eng rpm ...	625-3500	625-3500
Battery—Volts, Terminal Ground	12, Negative	12, Negative
<b>VALVES</b>		
Size and Material .....	Int 1.750", SAE 8645	
Exh 1.375", Sil 10, 2155N or 21-4NS		
Tappet Clr—Seat Angle.....	Int Hydraulic Lifters, 45°	
Exh Hydraulic Lifters, 45°		
Exhaust Seat Inserts.....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Car WCD 2179-S	Car WCD 2179-S or Strom AAVB 267
Type .....	Dual DD	Dual DD
Float Level .....	(2)	(2)
Choke Control .....	Automatic	Automatic
<b>CAPACITY</b>		
Oil .....	(qt) 6 Refill	6 Refill
Water (includes heater)....	(qt) 18	20
Transmission .....	(pt) 1.75	20
Rear Axle .....	(pt) 4-1/2	4-1/2
Gasoline .....	(gal) 19	19
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 122	122
Over All Lgth Incl Bumpers (in)	206.7	206.7
Shipping Weight .....	(lb) 3750	3875
Tire Size—Recm Press.....	(lb) 7.10 x 15-24-24(3)	7.10 x 15-24-24(3)
Rear Axle Ratio.....	3.9	3.6
<b>LOCATION CHASSIS SERIAL NO.</b>		
Left Front Door Pillar Post		
(1) Horsepower, Torque and BMEP data not released with 7.5 compression ratio at time of publication.		
(2) Carter 2179-S: Vertical distance between top of float and machined surface of casting is 15/64". Stromberg AAVB 267: Vertical distance from air horn gasket to bottom of float is 1-7/16".		
(3) 7.60 x 15-24-24 optional.		



**BUICK**

CAR MODEL	Century Series 60	Super Series 50	Roadmaster Series 70
<b>ENGINE</b>			
No. Cyl-Head Type .....	V-8-I	V-8-I	V-8-I
Bore and Stroke (in) .....	4.0 x 3.2	4.0 x 3.2	4.0 x 3.2
Displacement (cu in) .....	322.0	322.0	322.0
AMA Horsepower .....	51.2	51.2	51.2
Max Horsepower @ rpm .....	236 @ 4600(1)	236 @ 4600(1)	236 @ 4600
Max Torque, lb-ft @ rpm .....	330 @ 3000(1)	330 @ 3000(1)	330 @ 3000
Max bmep, lb/sq in. ....	154.5(1)	154.5(1)	154.5
Head Material .....	Cast Iron	Cast Iron	Cast Iron
Compression Ratio .....	9.0(1)	9.0(1)	9.0
Piston Material .....	AA	AA	AA
Bearing Material .....	Rods Moraine	400 Alum; Mains Durex	100A
<b>IGNITION</b>			
Spark Plug—Factory Eqpt. ....	AC 44-5	AC 44-5	AC 44-5
Alternate .....		AL A5 or AR5, Champ J-8	
Spark Plug Gap .....		.030" to .035"	
Firing Order .....		1-2-7-8-4-5-6-3	
Distributor—Make and Model ...		Delco-Remy 1110849	
Breaker Gap .....		.0125" to .0175"	
Cam Angle .....			
Timing—Crankshaft Degrees ..	5° BTC	5° BTC	5° BTC
Adv Deg—Centrif—Vac. ....	24-1/2—19-1/2	24-1/2—19-1/2	24-1/2—19-1/2
Adv Begins—Ends—Eng rpm ....	625-3500	625-3500	625-3500
Battery—Volts, Terminal Ground	12. Negative	12. Negative	12. Negative
<b>VALVES</b>			
Size and Material .....	Int	1.750", SAE 8645	
Exh .....		1.375", Sil 10, 2155N or 21-4NS	
Tappet Clr—Seat Angle .....	Int	Hydraulic Lifters, 45°	
Exh .....		Hydraulic Lifters, 45°	
Exhaust Seat Inserts .....	None	None	None
<b>CARBURETOR</b>			
Make, Model .....		Car WCFB 2197-S or RP 4G	
Type .....		4 Barrel DD	
Float Level .....	Carter: 3/32"	primary, 3/16"	secondary (2)
Choke Control .....	Automatic	Automatic	Automatic
<b>CAPACITY</b>			
Oil .....	(qt) 6 Refill	6 Refill	6 Refill
Water (includes heater) ....	(qt) (3)	(3)	20
Transmission .....	(pt) (4)	(4)	20
Rear Axle .....	(pt) 4-1/2	4-1/2	4-1/2
Gasoline .....	(gal) 19	19	19
<b>GENERAL DATA (Four-Door Sedan)</b>			
Wheelbase .....	(in) 122	127	127
Over All Lgth Incl Bumpers (in)	206.7	216.0	216.0
Shipping Weight .....	(lb) (5)	(6)	4275
Tire Size—Recm Press. ....	(lb) 7.60 x 15-24-24	7.60 x 15-24-24	8.00 x 15-24-24
Rear Axle Ratio .....	(7)	(7)	3.4
<b>LOCATION CHASSIS SERIAL NO.</b>			
		Left Front Door Pillar Post	

- (1) Data given for Dynaflo equipped cars—with Synchronesh transmission compression ratio is 8.4. Horsepower, Torque and BMEP not available for 8.4 compression ratio.
- (2) From machined surface of cover to top of float. Data on Rochester carburetor not available.
- (3) 18 quarts capacity with Synchronesh transmission—20 quarts with Dynaflo.
- (4) Synchronesh transmission requires 2-1/2 pints—Dynaflo 20 pints.
- (5) 3816 pounds with Synchronesh — 3930 pounds with Dynaflo.
- (6) 4136 pounds with Synchronesh — 4261 pounds with Dynaflo.
- (7) 3.9 with Synchronesh—3.4 with Dynaflo.

# **CADILLAC**

CAR MODEL	62	60 Special	75
<b>ENGINE</b>			
No. Cyl-Head Type .....	V-8-I	V-8-I	V-8-I
Bore and Stroke (in) .....	3-13/16x3-5/8	3-13/16x3-5/8	3-13/16x3-5/8
Displacement (cu in) .....	331	331	331
AMA Horsepower .....	46.5	46.5	46.5
Max Horsepower @ rpm .....	250 @ 4600 (1)	250 @ 4600	250 @ 4600
Max Torque, lb-ft @ rpm .....	345 @ 2800	345 @ 2800	345 @ 2800
Max bmep, lb/sq in .....	157.2	157.2	157.2
Head Material .....	Cast Iron	Cast Iron	Cast Iron
Compression Ratio .....	9.0	9.0	9.0
Piston Material .....	AA	AA	AA
Bearing Material .....	Rods Moraine 400; Mains Moraine 400 or 100		

<b>IGNITION</b>			
Spark Plug—Factory Eqpt .....	AC 44-5	AC 44-5	AC 44-5
Alternate .....		AL A5 or AR5, Champ J-8	
Spark Plug Gap .....	.035"	.035"	.035"
Firing Order .....		1-8-4-3-6-5-7-2	
Distributor—Make and Model...		DR 1110852	
Breaker Gap .....	.016"	.016"	.016"
Cam Angle .....	31° ± 1-1/2°	31° ± 1-1/2°	31° ± 1-1/2°
Timing—Crankshaft Degrees ...	2-1/2° BTC	2-1/2° BTC	2-1/2° BTC
Adv Deg—Centrif—Vac .....	23-1/2-27-1/2	23-1/2-27-1/2	23-1/2-27-1/2
Adv Begins—Ends—Eng rpm ...	900-4000	900-4000	900-4000
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative

<b>VALVES</b>			
Size and Material .....	Int	1-3/4, SAE 8645 or SAE 3140	
Exh .....		1-9/16", Sll X-10 or 2112N	
Tappet Clr—Seat Angle.....	Int	Hydraulic Lifters, 45°	
Exh .....		Hydraulic Lifters, 45°	
Exhaust Seat Inserts.....	None	None	None

<b>CARBURETOR</b>			
Make, Model .....	Car WCFB 2185-S or 2266-S or RP 7007970 (2)		
Type .....	DD 4 Barrel		
Float Level .....	Car Pri 1/8", Sec 3/16"; RP 1-19/32" (3)		
Choke Control .....	Automatic		

<b>CAPACITY</b>			
Oil .....	(qt) 5 Refill	5 Refill	5 Refill
Water (includes heater).....	(qt) 20.3	20.3	22.8
Transmission .....	(pt) 22	22	22
Rear Axle .....	(pt) 5	5	5
Gasoline .....	(gal) 20	20	20

<b>GENERAL DATA (Four-Door Sedan)</b>			
Wheelbase .....	(in) 129	133	149.8
Over All Lgth Incl Bumpers (in)	216.3 (4)	227.3	237.1
Shipping Weight .....	(lb) 4370	4540	5015
Tire Size—Recm Press.....	(lb) 8.00x15-24-24 (5)		8.20x15-28-28
Rear Axle Ratio.....	3.36 (6)	3.36 (6)	3.77

<b>LOCATION CHASSIS SERIAL NO.</b>	Left Front Door Pillar Post		
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- (1) Eldorado uses two Rochester four barrel carburetors giving 270 bhp @ 4800 rpm.
- (2) Air conditioned cars use Car WCFB 2186-S or 2267-S, or Rochester 7007971.
- (3) Carter: Distance between float and machined surface of bowl cover casting, bowl cover assembly inverted.  
Rochester: Distance between bottom of float and bowl cover gasket, bowl cover assembly inverted.
- (4) Overall length of Coupes and Convertibles is 223.3.
- (5) All white sidewall tires are 8.20x15.
- (6) 3.07 optional.

# CHEVROLET

CAR MODEL	Bel Air Two-Ten One-Fifty Synchronesh	Bel Air Two-Ten One-Fifty Powerglide	Bel Air Two-Ten One-Fifty
<b>ENGINE</b>			
No. Cyl-Head Type	6-I	6-I	V-8-I
Bore and Stroke (in)	3-9/16x3-15/16	3-9/16x3-15/16	3-3/4x3
Displacement (cu in)	235.5	235.5	265
AMA Horsepower	30.4	30.4	45
Max Horsepower @ rpm	123 @ 3800	136 @ 4200	162 @ 4400 (1)
Max Torque, lb-ft @ rpm	207 @ 2000	209 @ 2200	257 @ 2200
Max bmep, lb/sq in	132.6	133.8	146.3
Head Material	Cast Iron	Cast Iron	Cast Iron
Compression Ratio	7.5	7.5	8.0
Piston Material	AA	AA	AA
Bearing Material		Steel Backed Babbitt	
<b>IGNITION</b>			
Spark Plug—Factory Eqpt	AC 44-5	AC 44-5	AC 44-5
Alternate		AL A5 or AR5, Champ J-8	
Spark Plug Gap	.035"	.035"	.035"
Firing Order		1-5-3-6-2-4	1-8-4-3-6-5-7-2
Distributor—Make and Model		DR 1112403	DR 1110847
Breaker Gap		.016" (worn)	.016" (worn)
Cam Angle		26° to 33°	26° to 33°
Timing—Crankshaft Degrees	TDC @ Idle	TDC @ Idle	4° BTC @ Idle
Adv Deg—Centrif—Vac	26-15	26-15	32-27-1/2
Adv Begins—Ends—Eng rpm	600-3500	600-3500	600-3600
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
<b>VALVES</b>			
Size and Material	Int 1.875", 8645 Exh 1.50", Sil XB(2)	1.72", 8645 1.50, MXCR(2)	
Tappet Ctr—Seat Angle	Int .006" H, 30° Exh .013" H, 45°	Hyd. Lifters, 30° Hyd. Lifters 45°	.008" H, 45° (3) .016" H, 45° (3)
Exhaust Seat Inserts	None	None	None
<b>CARBURETOR</b>			
Make, Model	RP 7005921	RP 7005922	RP 7006825 (1)
Type	Sgl DD	Sgl DD	Dual DD
Float Level	1-5/16" (4)	1-5/16" (4)	1-5/32" (4)
Choke Control	Automatic	Automatic	Automatic
<b>CAPACITY</b>			
Oil	(qt) 5 Refill	5 Refill	4 Refill
Water (includes heater)	(qt) 17	17	17
Transmission	(pt) 2 (5)	22	2 (6)
Rear Axle	(pt) 4	4	4
Gasoline	(gal) 16	16	16
<b>GENERAL DATA (Four-Door Sedan)</b>			
Wheelbase	(in) 115	115	115
Over All Lgth Incl Bumpers	(in) 195.6	195.6	195.6
Shipping Weight	(lb) 3180	3275	3150 (7)
Tire Size—Recm Press.	(lb) 6.70x15-24-24	6.70x15-24-24	6.70x15-24-24
Rear Axle Ratio	3.7 (8)	3.55	3.7 (9)

- LOCATION CHASSIS SERIAL NO.** Left Front Body Hinge Pillar
- (1) 180 bhp @ 4600 rpm with four barrel carburetor and dual exhaust system optional at extra cost.
  - (2) All exhaust valves al dip coated.
  - (3) Hydraulic Lifters are used on all V-8 engines with Powerglide transmission.
  - (4) Distance between bottom of float and bowl cover gasket with bowl cover assembly inverted.
  - (5) One pint additional with overdrive.
  - (6) One pint additional with overdrive. Powerglide requires 22 pints.
  - (7) 3245 pounds with Powerglide transmission.
  - (8) 4.11 with overdrive transmission.
  - (9) 4.11 with overdrive; 3.55 with Powerglide transmission.



# CHRYSLER

CAR MODEL	Windsor DeLuxe C-67	New Yorker DeLuxe C-68
ENGINE		
No. Cyl-Head Type .....	V-8-1	V-8-1
Bore and Stroke (in) .....	3.63x3.63	3.81x3.63
Displacement (cu in) .....	301	331
AMA Horsepower .....	42.2	46.5
Max Horsepower @ rpm .....	188 @ 4400	250 @ 4600
Max Torque, lb-ft @ rpm .....	275 @ 2400	340 @ 2800
Max bmep, lb/sq in .....	137.8	154.9
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	8.0	8.5
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt	
IGNITION		
Spark Plug—Factory Eqpt .....	AL 4S-165	AL 4GS-175
Alternate .....	AC 45 or 45R, Champ J-7	AC 45XL or 45XLR, Champ N-8B
Spark Plug Gap .....	.035"	.035"
Firing Order .....	1-8-4-3	6-5-7-2
Distributor—Make and Model...	AL IAZ-4001-D(1)	AL IAZ-4001-F
Breaker Gap .....	.017"	.017"
Cam Angle .....	32° to 36° (2)	32° to 36° (2)
Timing—Crankshaft Degrees ...	2° BTC (1)	6° BTC
Adv Deg—Centrif—Vac .....	34-23	24-23
Adv Begins—Ends—Eng rpm ...	700-4600	700-3450
Battery—Volts, Terminal Ground	6. Positive	6. Positive
VALVES		
Size and Material .....	Int 1.81", Sil F	1.94", Sil 1 or Sil F
Exh 1.50", 21-4N		1.75", 21-4N
Tappet Ctr—Seat Angle.....	Int Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exh Hydraulic Lifters, 45°		Alloy Cast Iron
Exhaust Seat Inserts.....	None	
CARBURETOR		
Make, Model .....	B and B (Car) BBD-2180S	Car WCFB 2126S
Type .....	Dual DD	DD 4 Barrel
Float Level .....	3/16" (3)	Pri 1/8"; Sec 3/16" (4)
Choke Control .....	Automatic	Automatic
CAPACITY		
Oil .....	(qt) 5 Refill	5 Refill
Water (includes heater)....	(qt) 25	26
Transmission .....	(pt) 2-3/4 (5)	22
Rear Axle .....	(pt) 3-1/4	3-1/2
Gasoline .....	(gal) 20	20
GENERAL DATA (Four-Door Sedan)		
Wheelbase .....	(in) 126.0	126.0
Over All Lgth Incl Bumpers (in)	218.6	218.8
Shipping Weight .....	(lb) 3950 (6)	4160
Tire Size—Recm Press.....	(lb) 7.60x15-24-24	8.00x15-24-24
Rear Axle Ratio .....	3.73 (7)	3.36
LOCATION CHASSIS SERIAL NO.		
	Left Front Door Body Hinge Post	

- (1) This distributor used on approximately first half year's production. Later models use Auto-Lite IAZ-4001-E and ignition timing is set to 6° BTC.
- (2) Total for two-breaker distributor; 26° to 28° for each breaker.
- (3) From top of float chamber to top of float.
- (4) Between machined surface of bowl cover to nearest point on float.
- (5) 20 pints when PowerFlite transmission is used.
- (6) Includes PowerFlite transmission.
- (7) 3.54 used with PowerFlite transmission.

CAR MODEL	Firedome S-22	Fireflite S-21
<b>ENGINE</b>		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	3.72x3.344	3.72x3.344
Displacement (cu in) .....	291	291
AMA Horsepower .....	44.3	44.3
Max Horsepower @ rpm .....	185 @ 4400	200 @ 4400
Max Torque, lb-ft @ rpm .....	245 @ 2800	274 @ 2800
Max bmep, lb/sq in .....	127.0	142.0
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.5	7.5
Piston Material .....	AA	AA
Bearing Material .....		Steel Backed Babbitt
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	AL 4S-140	AL 4S-165
Alternate .....		AC 45 or 45R, Champ J-7
Spark Plug Gap .....	.035"	.035"
Firing Order .....		1-8-4-3-6-5-7-2
Distributor—Make and Model...	AL IAZ-4002-C	AL IAZ-4002-D
Breaker Gap .....	.017"	.017"
Cam Angle .....	32° to 36° (1)	32° to 36° (1)
Timing—Crankshaft Degrees ...	10° BTC	4° BTC
Adv Deg—Centrif—Vac .....	16-14	24-23
Adv Begins—Ends—Eng rpm ...	700-1600	700-3600
Battery—Volts, Terminal Ground	6, Positive	6, Positive
<b>VALVES</b>		
Size and Material .....	Int Exh	1.84", Sil 1 or Sil F 1.50" XCR
Tappet Clr—Seat Angle.....	Int Exh	Hydraulic Lifters, 45° Hydraulic Lifters, 45°
Exhaust Seat Inserts .....		Alloy Cast Iron
<b>CARBURETOR</b>		
Make, Model .....	Car BBD 2176S	Car WCFB 2210S
Type .....	Dual DD	DD 4 Barrel
Float Level .....	3/16" (2)	Pri. 1/8"; Sec. 3/16" (3)
Choke Control .....	Automatic	Automatic
<b>CAPACITY</b>		
Oil .....	(qt) 5 Refill	5 Refill
Water (includes heater).....	(qt) 24	24
Transmission .....	(pt) 2-3/4(4)	2-3/4(4)
Rear Axle .....	(pt) 3-1/4	3-1/2
Gasoline .....	(gal) 20	20
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 126.0	126.0
Over All Lgth Incl Bumpers (in)	217.9	217.9
Shipping Weight .....	(lb) 3890 (5)	3960 (5)
Tire Size—Recm Press.....	(lb) 7.60x15-24-24	7.60x15-24-24
Rear Axle Ratio.....	3.9 (6)	3.73 (7)
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Left Front Door Body Hinge Post	
(1) Total for two-breaker distributor; 26° to 28° for each breaker.		
(2) From top of float chamber without gasket to top of float at center.		
(3) Between machined surface of bowl cover and top of float.		
(4) 3/4 pint additional with overdrive. PowerFlite requires 20 pints.		
(5) Weight includes PowerFlite transmission.		
(6) 4.3 with overdrive; 3.73 with PowerFlite transmission.		
(7) 4.1 with overdrive; 3.54 with PowerFlite transmission.		



# DODGE

CAR MODEL	Coronet D-56-1	Coronet D-55-1 Royal D-55-2	Custom Royal D-55-3
ENGINE			
No. Cyl-Head Type .....	6-L	V-8-1	V-8-I
Bore and Stroke (in) .....	3.25x4.63	3.63x3.256	3.63x3.256
Displacement (cu in) .....	230	270	270
AMA Horsepower .....	25.4	42.2	42.2
Max Horsepower @ rpm .....	123 @ 3600	175 @ 4400 (1)	183 @ 4400 (1)
Max Torque, lb-ft @ rpm .....	194 @ 1600	240 @ 2400 (1)	245 @ 2400 (1)
Max bmep, lb/sq in .....	127.2	134.0 (1)	136.9 (1)
Head Material .....	Cast Iron	Cast Iron	Cast Iron
Compression Ratio .....	7.4	7.6	7.6
Piston Material .....	AA	AA	AA
Bearing Material .....		Steel Backed Babbitt	
IGNITION			
Spark Plug—Factory Eqpt .....	AL 4S-140	AL 4S-165	AL 4S-165
Alternate .....		AC 45 or 45R, Champ J-7	
Spark Plug Gap .....	.035"	.035"	.035"
Firing Order .....	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model ..	AL IAT-4101B	ALIAZ-4003G (2)	AL IAZ-4003F
Breaker Gap .....	.020"	.017"	.017"
Cam Angle .....	39° ± 3°	32° to 36° (3)	32° to 36° (3)
Timing—Crankshaft Degrees ...	2° BTC	4° BTC	4° BTC
Adv Deg—Centrif—Vac .....	16-16	32-8 (2)	24-14
Adv Begins—Ends—Eng rpm .....	800-2700	700-3300	700-3250
Battery—Volts, Terminal Ground	6, Positive	6, Positive	6, Positive
VALVES			
Size and Material .....	Int 1.53", Sil F	1.72", Sil F	1.75", Sil 1 or F
Exh 1.41", XCR		1.47", XCR	1.41", XCR
Tappet Clr—Seat Angle.....	Int .010" H, 45°	Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exh .010" H, 45°		Hydraulic Lifters, 45°	
Exhaust Seat Inserts.....	Yes	None	Yes
CARBURETOR			
Make, Model .....	Strom WW3-124	Strom WW3-131 (1)	Strom WW3-120 (1)
Type .....	Dual DD	Dual DD	Dual DD
Float Level .....	3/16" (4)	3/16" (4)	3/16" (4)
Choke Control .....	Automatic	Automatic	Automatic
CAPACITY			
Oil .....	(qt) 5 Refill	5 Refill	5 Refill
Water (includes heater)....	(qt) 14	20	20
Transmission .....	(pt) 2-3/4 (5)	2-3/4 (5)	2-3/4 (5)
Rear Axle .....	(pt) 3-1/4	3-1/4	3-1/4
Gasoline .....	(gal) 17	17	17
GENERAL DATA (Four-Door Sedan)			
Wheelbase .....	(in) 120	120	120
Over All Lgth Incl Bumpers (in)	212.1	212.1	212.1
Shipping Weight .....	(lb) 3295	(6)	3485
Tire Size—Recm Press.....	(lb) 6.70x15-24-24	7.10x15-24-24	7.10x15-24-24
Rear Axle Ratio.....	3.9 (7)	3.73 (8)	3.73 (8)

LOCATION CHASSIS SERIAL NO.	Left Front Door Body Hinge Post
(1) With Special Power Package 193 bhp @ 4400 rpm, 245 lb-ft @ 2800 rpm, 136.9 bmep. Package consists of Carter 4-barrel Model WCFB-2253S carburetor and dual exhaust system when used on Custom Royal. When Power Package is purchased on the Coronet or Royal the dual rocker shaft engine normally used in the Custom Royal is used.	
(2) Auto Lite IAZ-4003E used on early production engines. Adv Deg—Centrif—Vac 36-14.	
(3) Total for two-breaker distributor; 26° to 28° for each breaker.	
(4) From top of float chamber without gasket to top of float.	
(5) 3/4 pint additional with overdrive. PowerFlite requires 20 pints.	
(6) Coronet 3395, Royal 3425.	
(7) 4.3 with overdrive; 3.73 with PowerFlite transmission.	
(8) 4.1 with overdrive; 3.54 with PowerFlite transmission.	

Brief Passenger Car Data for 1955

January 1, 1955

CAR MODEL	Mainline Customline Fairlane Six	Mainline Customline Fairlane Eight
<b>ENGINE</b>		
No. Cyl-Head Type .....	6-I	V-8-I
Bore and Stroke (in) .....	3.62x3.6	3.62x3.3
Displacement (cu in) .....	223	272
AMA Horsepower .....	31.5	42.05
Max Horsepower @ rpm .....	120 @ 4000	162 @ 4400 (1)
Max Torque, lb-ft @ rpm .....	195 @ 1200 to 2400	258 @ 2200 (1)
Max bmep, lb/sq in .....	131.9	143.0 (1)
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.5	7.6 (1)
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt	Copper Lead, Rods; Babbitt, Mains
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	Champ 870	Champ 870
Alternate .....	AC 85T or AL BF-7	
Spark Plug Gap .....	.032" to .036"	.032" to .036"
Firing Order .....	1-5-3-6-2-4	1-5-4-8-6-3-7-2
Distributor—Make and Model...	Holley FDH-12127-A	Holley FDJ-12127-C1 & C2
Breaker Gap .....	.025"	.015"
Cam Angle .....	35° to 38°	26° to 28.5°
Timing—Crankshaft Degrees ...	3° BTC (2)	3° BTC (2)
Adv Deg—Centrif—Vac .....	(3)	(3)
Battery—Volts. Terminal Ground	6. Positive	6. Positive
<b>VALVES</b>		
Size and Material .....	Int 1.78", Silchrome #1 Exh 1.51", Ford Cast Austenitic	
Tappet Clr—Seat Angle.....	Int .015" H, 45° Exh .019" H, 45°	.019" H, 45° .019" H, 45°
Exhaust Seat Inserts.....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Ford—Holley EBP 9510	Ford—Holley ECG 9510
Type .....	Sgl DD	Dual DD
Float Level .....	11/16" (4)	5/8" (5)
Choke Control .....	Manual	Manual
<b>CAPACITY</b>		
Oil .....	(qt) 4 Refill	5 Refill
Water (includes heater).....	(qt) 16	20
Transmission .....	(pt) 3 (6)	3 (6)
Rear Axle .....	(pt) 3-1/2	3-1/2
Gasoline .....	(gal) 17-1/2	17-1/2
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 115.5	115.5
Over All Lgth Incl Bumpers (in)	198.5	198.5
Shipping Weight .....	(lb) 3126	3236
Tire Size—Recm Press.....	(lb) 6.70x15-26-23	6.70x15-26-23
Rear Axle Ratio .....	3.89 (7)	3.78 (8)
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Left Front Door Pillar Post	

- (1) 8.5 C/R, 182 bhp @ 4400 rpm, 268 lb-ft @ 2600 rpm engine is optional on V-8 cars with Fordomatic. This engine has a 4 barrel carburetor and dual exh. (2) 3° BTC with standard transmission; 6° BTC with Fordomatic. (3) Full vac actuated distributor—max adv W.O.T. 4000 rpm 24-1/2° on the six, 31-1/2° on the V-8. (4) From top of bowl to fuel level. (5) From top of float to surface of bowl cover. (6) 4-1/2 pts. with overdrive. Fordomatic Six, 18.7 pts. Fordomatic V-8, 19.5 pts. (7) 4.11 optional. 4.11 standard with overdrive. 3.89 optional. 3.31 standard with Fordomatic. 3.55 optional. (8) 3.89 optional. 3.89 standard with overdrive. 3.78 optional. 3.31 standard with Fordomatic. 3.55 optional.

# HUDSON

CAR MODEL	Metropolitan	Rambler	Wasp
ENGINE			
No. Cyl-Head Type .....	4-I	6-L	6-L
Bore and Stroke (in) .....	2-37/64x3-1/2	3-1/8x4-1/4	3x4-3/4
Displacement (cu in) .....	73.2	195.6	202
AMA Horsepower .....	10.63	23.44	21.6
Max Horsepower @ rpm .....	42 @ 4500	90 @ 3800	104 @ 4000 (1)
Max Torque, lb-ft @ rpm .....	62 @ 2400	150 @ 1600	158 @ 1400
Max bmep, lb/sq in .....	132.0	115.7	117.9
Head Material .....	Cast Iron	Cast Iron	Cast Iron (1)
Compression Ratio .....	7.2	7.3 (2)	7.5 (1)
Piston Material .....	AA	AA	AA
Bearing Material .....		Steel Backed Babbitt	
IGNITION			
Spark Plug—Factory Eqpt .....	Champ N8B	AL A7	Champ H-10
Alternate .....	45XL, 4GS 150	44-5, J-8	45L, AL-7
Spark Plug Gap .....	.024"	.030"	.032"
Firing Order .....	1-3-4-2	1-5-3-6-2-4	1-5-3-6-2-4
Distributor—Make and Model...	Lucas DM-2	DR 1112382	AL IAT-4016
Breaker Gap .....	.015"	.022"	.020"
Cam Angle .....	60° ± 3°	31° to 37°	39°
Timing—Crankshaft Degrees ...	11° BTC	4° ATC	TDC
Adv Deg—Centrif—Vac .....	7-12	22-7-1/2	27-15
Adv Begins—Ends—Eng rpm .....	600-1700	600-2800	600-3000
Battery—Volts, Terminal Ground	12, Positive	6, Positive	6, Positive
VALVES			
Size and Material .....	Int 1-3/8", Sil 1	1-19/32", 3140	1.5", 8645
	Exh 1-3/16", XB	1-11/32", 2112	1.4", 2112
Tappet Ctr—Seat Angle.....	Int .015" C, 45°	.015" H, 45°	.010" H, 45°
	Exh .015" C, 45°	.015" H, 45°	.012" H, 45°
Exhaust Seat Inserts.....	None	None	None
CARBURETOR			
Make, Model .....	Zenith	Car YF-2014S	Car WAI-2009SA
Type .....	Sgl DD	Sgl DD	Sgl DD
Float Level .....	NA	1/2" (3)	7/16" (4)
Choke Control .....	Manual	Automatic	Automatic
CAPACITY			
Oil .....	(qt) 4 Refill	4 Refill	5 Refill
Water (Includes heater)....	(qt) 8	12	15
Transmission .....	(pt) 5-1/2	1-1/2 (5)	2-1/4 (6)
Rear Axle .....	(pt) 2	3	3
Gasoline .....	(gal) 10-1/2	20	20
GENERAL DATA (Four-Door Sedan)			
Wheelbase .....	(in) 85	108 (7)	114-1/4
Over All Lgth Incl Bumpers (in)	149-1/2	186-1/4	202-1/4
Shipping Weight .....	(lb) 1875	2630	3045
Tire Size—Recm Press.....	(lb) 5.20x13-24-22	6.40x15-24-24	6.70x15-24-24
Rear Axle Ratio .....	4.56	3.77 (8)	4.1 (9)
LOCATION CHASSIS SERIAL NO.			
Under Hood on Dash Panel			

- 8.0 compression ratio aluminum head and two carburetor system optional. 114 bhp @ 4000 rpm.
- 7.5 compression ratio optional.
- From top of float at free end to float chamber cover flange.
- From projection on bowl cover to seam of float, cover inverted.
- 2-3/4 pints with overdrive. 17 pints refill with Hydra-Matic.
- 3-1/2 pints with overdrive. 17 pints refill with Hydra-Matic.
- 108 inch wheelbase on 4-dr. sedan and Cross Country. 100 inch on Country Club, Suburban, and Club Sedan.
- 4.4 optional. 4.4 standard with overdrive, 4.1 optional. 3.3 standard with Hydra-Matic.
- 4.4 with overdrive, 3.58 with Hydra-Matic.





# IMPERIAL

CAR MODEL	Imperial C-69	Crown Imperial C-70
<b>ENGINE</b>		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	3.81x3.63	3.81x3.63
Displacement (cu in) .....	331	331
AMA Horsepower .....	46.5	46.5
Max Horsepower @ rpm .....	250 @ 4600	250 @ 4600
Max Torque, lb-ft @ rpm .....	340 @ 2800	340 @ 2800
Max bmep, lb/sq in .....	154.9	154.9
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	8.5	8.5
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt	
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	AL 4GS-175	AL 4GS-175
Alternate .....	AC 45XL or 45XLR	Champ N-8B
Spark Plug Gap .....	.035"	.035"
Firing Order .....	1-8-4-3-6-5-7-2	
Distributor—Make and Model ..	AL IAZ-4001-F	AL IAZ-4001-F
Breaker Gap .....	.017"	.017"
Cam Angle .....	32° to 36° (1)	32° to 36° (1)
Timing—Crankshaft Degrees ...	6° BTC	6° BTC
Adv Deg—Centrif—Vac .....	24-23	24-23
Adv Begins—Ends—Eng rpm ...	700-3450	700-3450
Battery—Volts, Terminal Ground	6, Positive	12, Positive
<b>VALVES</b>		
Size and Material .....	Int 1.94", Sil 1 or Sil F	1.94", Sil 1 or Sil F
Exh .....	1.75", 21-4N	1.75", 21-4N
Tappet Clr—Seat Angle.....	Int Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exh .....	Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exhaust Seat Inserts.....	Alloy Cast Iron	
<b>CARBURETOR</b>		
Make, Model .....	Car WCFB-2126S	Car WCFB-2126S
Type .....	DD 4 Barrel	DD 4 Barrel
Float Level .....	Pri 1/8"; Sec 3/16" (2)	
Choke Control .....	Automatic	Automatic
<b>CAPACITY</b>		
Oil .....	(qt) 5 Refill	5 Refill
Water (includes heater)....	(qt) 26	26
Transmission .....	(pt) 22	22
Rear Axle .....	(pt) 3-1/2	5
Gasoline .....	(gal) 20	20
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 130.0	149.5
Over All Lgth Incl Bumpers (in)	223.0	242.5
Shipping Weight .....	(lb) 4565	Not Available
Tire Size—Recm Press.....	(lb) 8.20x15-24-24	8.90x15-24-24
Rear Axle Ratio.....	3.54	3.54
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Left Front Door Body Hinge Post	
(1) Total for two-breaker distributor; 26° to 28° for each breaker.		
(2) From machined surface of cover to top of float.		



CAR MODEL	Special K-541	Manhattan K-542
<b>ENGINE</b>		
No. Cyl-Head Type .....	6-L	6-L
Bore and Stroke (in) .....	3.3125x4.375	3.3125x4.375
Displacement (cu in) .....	226.2	226.2
AMA Horsepower .....	26.3	26.3
Max Horsepower @ rpm .....	118 @ 3650	140 @ 3800
Max Torque, lb-ft @ rpm .....	200 @ 1800	215 @ 2600
Max bmep, lb/sq in .....	133.3	143.3
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.3	7.3
Piston Material .....	AA	AA
Bearing Material .....		Steel Backed Babbitt
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	AL A7	AL A7
Alternate .....		AC 45, Champion J-8
Spark Plug Gap .....	.028" to .032"	.028" to .032"
Firing Order .....		1-5-3-6-2-4
Distributor—Make and Model .....	DR 1110224	DR 1110238
Breaker Gap .....	.016"	.016"
Cam Angle .....	38° to 45°	38° to 45°
Timing—Crankshaft Degrees ...	4° BTC	4° BTC
Adv Deg—Centrif—Vac .....	18-10	10-10
Adv Begins—Ends—Eng rpm .....	640-3200	650-2000
Battery—Volts, Terminal Ground	6. Positive	6. Positive
<b>VALVES</b>		
Size and Material .....	Int 1.52", Silchrome 1	1.52", Silchrome 1
	Exh 1.33", Sil XCR	1.33", Sil XCR
Tappet Clr—Seat Angle .....	Int .014" C, 30°	.014" C, 30°
	Exh .014" C, 45°	.014" C, 45°
Exhaust Seat Inserts .....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Carter WGD	Carter WGD
Type .....	Dual DD	Dual DD
Float Level .....	1/4" (1)	11/32" (1)
Choke Control .....	Automatic	Automatic
<b>CAPACITY</b>		
Oil .....	(qt) 5 (2)	5 (2)
Water (includes heater) .....	(qt) 13.5	13.5
Transmission .....	(pt) 2-1/2 (3)	2-1/2 (3)
Rear Axle .....	(pt) 2-1/2	2-1/2
Gasoline .....	(gal) 17	17
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 118.5	118.5
Over All Lgth Incl Bumpers (in)	213.78	215.62
Shipping Weight .....	(lb) 3210 (4)	3375 (4)
Tire Size—Recm Press. ....	(lb) 15x6.70	15x6.70
Rear Axle Ratio .....	3.91 (5)	3.91 (5)
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Left Front Pillar Post	
(1) From top of float to bottom of float bowl cover. (2) 5 quarts refill — 6 quarts with new filter. (3) 3-1/2 with overdrive. (4) Add 115 pounds with Hydra-Matic; 40 pounds with overdrive. (5) 4.55 with overdrive; 3.31 with automatic.		



## MERCURY

CAR MODEL	Mercury Custom and Monterey	Mercury Montclair
<b>ENGINE</b>		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	3.75x3.3	3.75x3.3
Displacement (cu in) .....	292	292
AMA Horsepower .....	45.0	45.0
Max Horsepower @ rpm .....	188 @ 4400 (1)	198 @ 4400 (1)
Max Torque, lb-ft @ rpm .....	274 @ 2500 (1)	286 @ 2500 (1)
Max bmep, lb/sq in .....	141.5	147.5
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.6 (1)	8.5 (1)
Piston Material .....	AA	AA
Bearing Material .....	Copper Lead, Steel Backed	
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	Champ 870	Champ 870
Alternate .....	AC 85T or AL BF-7	
Spark Plug Gap .....	.032" to .036"	.032" to .036"
Firing Order .....	1-5-4-8-6-3-7-2	
Distributor—Make and Model...	Holley FEC-12127-A	
Breaker Gap .....	.014" to .016"	.014" to .016"
Cam Angle .....	26° to 28.5°	26° to 28.5°
Timing—Crankshaft Degrees ...	3° BTC (2)	6° BTC (2)
Adv Deg—Centrif—Vac .....	(3)	(3)
Adv Begins—Ends—Eng rpm....		
Battery—Volts, Terminal Ground	6, Positive	6, Positive
<b>VALVES</b>		
Size and Material .....	Int	1.78", Silchrome #1
	Exh	1.51", Ford Cast Austenitic
Tappet Clr—Seat Angle.....	Int	.019" H, 45°
	Exh	.019" H, 45°
Exhaust Seat Inserts.....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Holley ECK 9510 C and D	
Type .....	DD 4 Barrel	
Float Level .....	1/2" (4)	
Choke Control .....	Automatic	
<b>CAPACITY</b>		
Oil .....	5 Refill	5 Refill
Water (includes heater)....	20	20
Transmission .....	3-1/2 (5)	20-1/2
Rear Axle .....	3-1/2	3-1/2
Gasoline .....	18	18
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	119	119
Over All Lgth Incl Bumpers (in)	206.3	206.3
Shipping Weight .....	(lb)	
Tire Size—Recm Press.....	7.10x15-26-22	7.10x15-26-22
Rear Axle Ratio .....	3.73 (6)	3.15 (6)
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Right	Front Door Pillar Post
(1) 8.5 CR, 198 bhp engine is standard on Montclair models equipped with optional Merc-O-Matic Drive and available at extra cost on other Merc-O-Matic equipped models.		
(2) 3° BTC on all models with standard transmission; 6° BTC with Merc-O-Matic equipped cars.		
(3) Full vacuum actuated distributor—maximum advance with wide-open throttle is 29-1/2° @ 4000 rpm—at road load maximum advance is 31-1/2° @ 3000 to 4000 rpm.		
(4) From top of bowl without gasket to fuel level.		
(5) 5 pints with overdrive. Merc-O-Matic requires 20-1/2 pints.		
(6) 4.09 optional. 4.09 standard with overdrive, 3.73 optional. 3.15 standard with Merc-O-Matic, 3.54 optional.		

# SPARK PLUG HEAT

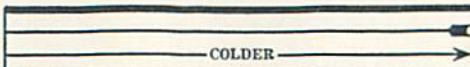
		← HOTTER →				
AC	14 mm	48 48X	47L*	46-5 46X 46	45XL** 45XLR**	45 44-5 45R 45L*
	10 mm	M-8		106		
	18 mm	88*		86		85T***
	7/8"	78 78S*		76 76S		
CHAM- PION	14 mm	J-14	J-12 H-12*	J-11 H-11*	N 8B**	J-8 H-10*
	10 mm	Y-8			Y-6	
	18 mm	10 Com-64*	9		870*** 8 Com	7
	7/8"	3 Com*	2 Com L		20	
AUTO- LITE	14 mm	A11 AL11*	AR10 AT10	A9 AL9* 4GS125**	AR8 ARL8* AT8, ATL8* 4S140	A7 AL7* AG7** 4GS150**
	10 mm			P6 PR6		
	18 mm		BT10 BR10		BT8 BR8	BF7***
	7/8"		TT10		TT8	

\*\*\*Special Plug—1955 Ford, Mercury, Lincoln  
60° Seat Angle—No Gasket Used

\*\* 3/4" Reach Plug  
\* 7/16" Reach Plug



# RANGE COMPARISONS

						
44	43L*	43-5	43	42	14 mm	AC
104					10 mm	
					18 mm	
74					7/8"	
J-7 H-9*	J-6	J-5 NA-8**	J-2 NA-10**	14 mm	CHAM- PION	
	Y-4-A			10 mm		
6 Com	860***	5 Com	4 Com	18 mm		
C-4	1 Com	0 Com		7/8"		
AT6	AR5 ARL5* 4S165	A5 AL5* AG5** 4GS175**	AR4 AT4 ATL4* 4GS200**	A3 AG3** AGR3** 4S250	14 mm	AUTO- LITE
			P4 PR4		10 mm	
BT6	BF6***	BT4 BR4	BT3	18 mm		
		TT4		7/8"		



# NASH

## CAR MODEL

## Metropolitan

## Rambler

## Statesman

### ENGINE

No. Cyl-Head Type	4- I	6-L	6-L
Bore and Stroke (in)	2-37/64x3-1/2	3-1/8x4-1/4	3-1/8x4-1/4
Displacement (cu in)	73.2	195.6	195.6
AMA Horsepower	10.63	23.44	23.44
Max Horsepower @ rpm	42 @ 4500	90 @ 3800	100 @ 3800 (1)
Max Torque, lb-ft @ rpm	62 @ 2400	150 @ 1600	155 @ 1600 (1)
Max bmep, lb/sq in	132.0	115.7	119.4
Head Material	Cast Iron	Cast Iron	Cast Iron
Compression Ratio	7.2	7.3 (2)	7.45 (1)
Piston Material	AA	AA	AA
Bearing Material		Steel Backed Babbitt	

### IGNITION

Spark Plug—Factory Eqpt	Champ N8B	AL A7	AL A7
Alternate	45XL, 4GS 150	AC 44-5,	Champ J-8
Spark Plug Gap	.024"	.030"	.030"
Firing Order	1-3-4-2	1-5-3-6-2-4	1-5-3-6-2-4
Distributor—Make and Model	Lucas DM-2	DR-1112382	DR-1112382
Breaker Gap	.015"	.022"	.022"
Cam Angle	60° + 3°	31° to 37°	31° to 37°
Timing—Crankshaft Degrees	11° BTC	4° ATC	4° ATC
Adv Deg—Centrif—Vac	7-12	22-7-1/2	22-7-1/2
Adv Begins—Ends—Eng rpm	600-1700	600-2800	600-2800
Battery—Volts, Terminal Ground	12, Positive	6, Positive	6, Positive

### VALVES

Size and Material	Int 1-3/8", Sll 1	1-19/32", 3140	1-19/32", 3140
	Exh 1-3/16", XB	1-11/32", 2112	1-11/32", 2112
Tappet Ctr—Seat Angle	Int .015" C, 45°	.015" H, 45°	.015" H, 45°
	Exh .015" C, 45°	.015" H, 45°	.015" H, 45°
Exhaust Seat Inserts	None	None	None

### CARBURETOR

Make, Model	Zenith	Car YF-2014S	CarWCD-2034S
Type	Sgl DD	Sgl DD	Dual DD
Float Level	NA	1/2" (3)	1/2" (4)
Choke Control	Manual	Automatic	Automatic

### CAPACITY

Oil	(qt) 4 Refill	4 Refill	4 Refill
Water (includes heater)	(qt) 8	12	15
Transmission	(pt) 5-1/2	1-1/2 (5)	2-1/4 (6)
Rear Axle	(pt) 2	3	3
Gasoline	(gal) 10-1/2	20	20

### GENERAL DATA (Four-Door Sedan)

Wheelbase	(in) 85	108 (7)	114-1/4
Over All Lgth Incl Bumpers	(in) 149-1/2	186-1/4	202-1/4
Shipping Weight	(lb) 1875	2630	3045
Tire Size—Recm Press	(lb) 5.20x13-24-22	6.40x15-24-24	6.70x15-24-24
Rear Axle Ratio	4.56	3.77 (8)	4.4 (9)

### LOCATION CHASSIS SERIAL NO.

### Under Hood on Dash Panel

- (1) 8.5 compression ratio aluminum head and two carburetor system optional. 110 bhp @ 4000 rpm; 155 lb-ft @ 2000 rpm.
- (2) 7.5 compression ratio optional.
- (3) From top of float at free end to float chamber cover flange.
- (4) From bowl cover to top of float with bowl cover assembly inverted.
- (5) 2-3/4 pints with overdrive. 17 pints refill with Hydra-Matic.
- (6) 3-1/2 pints with overdrive. 17 pints refill with Hydra-Matic.
- (7) 108 inch wheelbase on 4-dr. sedan and Cross Country. 100 inch on Country Club, Suburban, and Club Sedan.
- (8) 4.4 optional. 4.4 standard with overdrive, 4.1 optional. 3.3 standard with Hydra-Matic.
- (9) 4.1 optional. 4.9 standard with overdrive, 4.4 optional. 3.6 standard with Hydra-Matic.

CAR MODEL	Ambassador Six	Ambassador V-8
<b>ENGINE</b>		
No. Cyl-Head Type .....	6-1	V-8-I
Bore and Stroke (in) .....	3-1/2x4-3/8	3-13/16x3-1/2
Displacement (cu in) .....	252.6	320
AMA Horsepower .....	29.4	46.5
Max Horsepower @ rpm .....	130 @ 3700 (1)	208 @ 4200
Max Torque, lb-ft @ rpm .....	220 @ 1600 (1)	300 @ 2000-2600
Max bmep, lb/sq in .....	131.3	141.3
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	7.6 (1)	7.8
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt	
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	AL A7	Champ H-10
Alternate .....	AC 44-5, Champ J-8	AC 45L, AL AL7
Spark Plug Gap .....	.030"	.035"
Firing Order .....	1-5-3-6-2-4	1-8-4-3-6-5-7-2
Distributor—Make and Model...	DR 1110227	AL IBJEO-13401
Breaker Gap .....	.022"	.016"
Cam Angle .....	31° to 37°	
Timing—Crankshaft Degrees ...	TDC	5° BTC
Adv Deg—Centrif—Vac .....	28-12	40-11
Adv Begins—Ends—Eng rpm....	600-2700	600-2400
Battery—Volts. Terminal Ground	6. Positive	6. Positive
<b>VALVES</b>		
Size and Material .....	Int 1.787", 3140	1.937", Sil 1
Exh 1-15/32", 2112		1.687", 2112
Tappet Clr—Seat Angle.....	Int .012" H, 30°	Hyd Lifters, 30°
Exh .016" H, 45°		Hyd Lifters, 45°
Exhaust Seat Inserts.....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Car YH-895-S	Car WGD 2231-S
Type .....	Sgl SD	Dual DD
Float Level .....	3/8" (2)	NA
Choke Control .....	Automatic	Automatic
<b>CAPACITY</b>		
Oil .....	(qt) 6 Refill	5 Refill
Water (includes heater).....	(qt) 18	21
Transmission .....	(pt) 2-1/4 (3)	22
Rear Axle .....	(pt) 4	4
Gasoline .....	(gal) 20	20
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 121-1/4	121-1/4
Over All Lgth Incl Bumpers (in)	209-1/4 (4)	209-1/4 (4)
Shipping Weight .....	(lb) 3430	3520
Tire Size—Recm Press.....	(lb) 7.10x15-24-24	7.10x15-24-24
Rear Axle Ratio .....	4.1 (5)	3.54
<b>LOCATION CHASSIS SERIAL NO.</b>		
Under Hood on Dash Panel		
(1) Optional LeMans Dual Jetfire engine with 8.0 compression ratio aluminum head. 140 bhp @ 4000 rpm, 230 lb-ft @ 2000 rpm.		
(2) From bowl cover to top of float with bowl cover assembly inverted.		
(3) 3-1/2 pints with overdrive. 22 pints refill with Hydra-Matic.		
(4) 219-1/4 overall with outside spare tire.		
(5) 4.4 standard with overdrive, 4.1 optional. 3.15 standard with Hydra-Matic.		

# OLDSMOBILE

CAR MODEL	"88"	Super "88"	Ninety-Eight
<b>ENGINE</b>			
No. Cyl-Head Type	V-8-I	V-8-I	V-8-I
Bore and Stroke (in)	3-7/8x3-7/16	3-7/8x3-7/16	3-7/8x3-7/16
Displacement (cu in)	324.3	324.3	324.3
AMA Horsepower	48	48	48
Max Horsepower @ rpm	185 @ 4000	202 @ 4000	202 @ 4000
Max Torque, lb-ft @ rpm	320 @ 2000	332 @ 2400	332 @ 2400
Max bmep, lb/sq in	148.8	154.4	154.4
Head Material	Cast Iron	Cast Iron	Cast Iron
Compression Ratio	8.5	8.5	8.5
Piston Material	AA	AA	AA
Bearing Material		Steel Backed Durex	
<b>IGNITION</b>			
Spark Plug—Factory Eqpt	AC 44-5	AC 44-5	AC 44-5
Alternate		AL A5 or AR5, Champ J-8	
Spark Plug Gap	.030"	.030"	.030"
Firing Order		1-8-7-3-6-5-4-2	
Distributor—Make and Model		Delco Remy 1110850	
Breaker Gap	.016"	.016"	.016"
Cam Angle	26° to 33°	26° to 33°	26° to 33°
Timing—Crankshaft Degrees	5° BTC @ 850 RPM with Vacuum Disconnected		
Adv Deg—Centrif—Vac	28-20	28-20	28-20
Adv Begins—Ends—Eng rpm	650-3450	650-3450	650-3450
Battery—Volts, Terminal Ground	12, Negative	12, Negative	12, Negative
<b>VALVES</b>			
Size and Material	Int Exh	1-3/4", SAE 3140 or SAE 8645	
Tappet Clr—Seat Angle	Int Exh	1-7/16", Silchrome XCR	
Exhaust Seat Inserts	None	Hydraulic Lifters, 45°	None
<b>CARBURETOR</b>			
Make, Model	RP 2GC	RP 4GC	
Type	Dual DD	DD 4 Barrel	
Float Level	1-5/16" ± 1/64" (1)	1-5/8" (2)	1-5/8" (2)
Choke Control	Automatic	Automatic	Automatic
<b>CAPACITY</b>			
Oil	(qt) 5 Refill	5 Refill	5 Refill
Water (Includes heater)	(qt) 21.5	21.5	21.5
Transmission	(pt) 2-1/2 (3)	2-1/2 (3)	2-1/2 (3)
Rear Axle	(pt) 5	5	5
Gasoline	(gal) 20	20	20
<b>GENERAL DATA (Four-Door Sedan)</b>			
Wheelbase	(in) 122	122	126
Over All Lgth Incl Bumpers	(in) 203.4	203.4	212.4
Shipping Weight	(lb) 3711 (4)	3762 (4)	3864 (4)
Tire Size—Recm Press	(lb) 7.10x15-24-22	7.60x15-24-22	7.60x15-24-22
Rear Axle Ratio	3.42 (5)	3.42 (6)	3.42

## LOCATION CHASSIS SERIAL NO.

Left Front Door Pillar Post

- (1) From flange of cover to bottom of float.
- (2) From cover gasket to bottom of float with bowl cover inverted and needle seated.
- (3) Hydra-Matic requires 10 quarts for refill.
- (4) Add 100 pounds for cars equipped with Hydra-Matic.
- (5) 3.64 optional. 3.07 standard with Hydra-Matic.
- (6) 3.64 optional. 3.23 standard with Hydra-Matic.



# PLYMOUTH

	Plaza P-26-1 Savoy P-26-3 Belvedere P-26-2	Plaza P-27-1 Savoy P-27-3 Belvedere P-27-2	Plaza P-27-1 Savoy P-27-3 Belvedere P-27-2
<b>CAR MODEL</b>			
<b>ENGINE</b>			
No. Cyl-Head Type .....	6-L	V-8-I	V-8-I
Bore and Stroke (in) .....	3.25x4.63	3.44 x 3.25	3.563 x 3.25
Displacement (cu in) .....	230	241	260
AMA Horsepower .....	25.4	37.9	40.6
Max Horsepower @ rpm .....	117 @ 3600	157 @ 4400	167 @ 4400(1)
Max Torque, lb-ft @ rpm .....	194 @ 1600	217 @ 2400	231 @ 2400(1)
Max bmep, lb/sq in .....	127.2	135.8	134.0(1)
Head Material .....	Cast Iron	Cast Iron	Cast Iron
Compression Ratio .....	7.4	7.6	7.6
Piston Material .....	AA	AA	AA
Bearing Material .....	Steel Backed Lead Base Babbitt		
<b>IGNITION</b>			
Spark Plug—Factory Eqpt .....	AL 4S-140	AL 4S-165	AL 4S-165
Alternate .....	AC 45, Champ J-8	AC 45 or 45R, Champ J-7	
Spark Plug Gap .....	.035"	.035"	.035"
Firing Order .....	1-5-3-6-2-4	1-8-4-3-6-5-7-2	
Distributor—Make and Model...	AL IAT-4101 B	AL IAZ-4003 C	AL IAZ-4003 G(2)
Breaker Gap .....	.020"	.017"	.017"
Cam Angle .....	39° ± 3°	32° to 36°(3)	32° to 36°(3)
Timing—Crankshaft Degrees ...	2° BTC	4° BTC	4° BTC
Adv Deg—Centrif—Vac .....	16-16	36-23	32-8(2)
Adv Begins—Ends—Eng rpm ...	800-2700	700-3800	700-3300
Battery—Volts, Terminal Ground	6, Positive	6, Positive	6, Positive
<b>VALVES</b>			
Size and Material .....	Int 1.53", Sil F	1.72", Sil F	1.72", Sil F
	Exh 1.41", XCR	1.41", XCR	1.41", XCR
Tappet Ctr—Seat Angle.....	Int .010" H, 45°	Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
	Exh .010" H, 45°	Hydraulic Lifters, 45°	Hydraulic Lifters, 45°
Exhaust Seat Inserts.....	Yes	None	None
<b>CARBURETOR</b>			
Make, Model .....	Car BBS 2063SA	Car BBD 2141S	Car BBD 2259S
Type .....	Sgl DD	Dual DD	Dual DD
Float Level .....	7/32" (4)	7/32" (4)	7/32" (4)
Choke Control .....	Automatic	Automatic	Automatic
<b>CAPACITY</b>			
Oil .....	(qt) 5 Refill	5 Refill	5 Refill
Water (includes heater)....	(qt) 14	20	20
Transmission .....	(pt) 2-3/4(5)	2-3/4(5)	2-3/4(5)
Rear Axle .....	(pt) 3-1/4	3-1/4	3-1/4
Gasoline .....	(gal) 17	17	17
<b>GENERAL DATA (Four-Door Sedan)</b>			
Wheelbase .....	(in) 115.0	115.0	115.0
Over All Lgth Incl Bumpers (in)	203.8	203.8	203.8
Shipping Weight .....	(lb) 3129 Plaza(6)	3246 Plaza(7)	3246 Plaza(7)
Tire Size—Recm Press.....	(lb) 6.70 x 15-24-24 or 7.10 x 15-24-24 Optional		
Rear Axle Ratio.....	3.73(8)	3.73(9)	3.73(9)
<b>LOCATION CHASSIS SERIAL NO.</b>			
	Left	Front Door	Body Hinge Post

- (1) With special Power Package consisting of a four barrel Carter WCFB carburetor 177 bhp @ 4400 rpm, 231 lb ft @ 2800 and 134.0 bmep.
- (2) Auto-Lite IAZ-4003 E used on early production engines.
- (3) Adv Deg—Centrif—Vac 36-14.
- (4) Total for two-breaker distributor; 26° to 28° for each breaker.
- (5) From top of float chamber without gasket to top of float.
- (6) 3/4 pint additional with overdrive. PowerFlite requires 20 pints.
- (7) Savoy 3154, Belvedere 3159.
- (8) Savoy 3265, Belvedere 3267.
- (9) 4.1 with overdrive; 3.73 with PowerFlite transmission.
- (9) 4.1 with overdrive; 3.54 with PowerFlite transmission.

Brief Passenger Car Data for 1955

January 1, 1955

# PACKARD

CAR MODEL	Clipper Deluxe-5540	Clipper Super-5540
<b>ENGINE</b>		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	3.8125x3.5	3.8125x3.5
Displacement (cu in) .....	320	320
AMA Horsepower .....	46.5	46.5
Max Horsepower @ rpm .....	225 @ 4600	225 @ 4600
Max Torque, lb-ft @ rpm .....	325 @ 2400-2800	325 @ 2400-2800
Max bmep, lb/sq in .....	153.2	153.2
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	8.25	8.25
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt	
<b>IGNITION</b>		
Spark Plug—Factory Eqpt .....	Champ H-10 (1)	Champ H-10 (1)
Alternate .....	AC 45L, AL AL7	
Spark Plug Gap .....	.033" to .037"	.033" to .037"
Firing Order .....	1-8-4-3-6-5-7-2	
Distributor—Make and Model...	AL IBJ 4001 (1)	
Breaker Gap .....	.016"	.016"
Cam Angle .....	27°	27°
Timing—Crankshaft Degrees ...	5° BTC	5° BTC
Adv Deg—Centrif—Vac .....	40-11 (1)	40-11 (1)
Adv Begins—Ends—Eng rpm....	600-2400 (1)	600-2400 (1)
Battery—Volts, Terminal Ground	12. Positive	12. Positive
<b>VALVES</b>		
Size and Material .....	Int 1.94", Sil 1	1.94", Sil 1
Exh 1.69", 2112		1.69", 2112
Tappet Clr—Seat Angle.....	Int Hydraulic Lifters, 30°	
Exh Hydraulic Lifters, 45°		
Exhaust Seat Inserts.....	None	None
<b>CARBURETOR</b>		
Make, Model .....	Car WC FB 135-140	
Type .....	DD 4 Barrel	
Float Level .....	1/8" primary, 5/32" secondary (2)	
Choke Control .....	Automatic	
<b>CAPACITY</b>		
Oil .....	(qt) 5 Refill	5 Refill
Water (includes heater)....	(qt) 26-1/2	26-1/2
Transmission .....	(pt) 3-1/4 (3)	3-1/4 (3)
Rear Axle .....	(pt) 4-1/4	4-1/4
Gasoline .....	(gal) 20	20
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase .....	(in) 122	122
Over All Lgth Incl Bumpers (in)	214-13/16	214-13/16
Shipping Weight .....	(lb) 3795 (4)	3795 (4)
Tire Size—Recm Press.....	(lb) 7.60x15-24-24	7.60x15-24-24
Rear Axle Ratio .....	3.9 (5)	3.9 (6)
<b>LOCATION CHASSIS SERIAL NO.</b>		
Left Front Door Hinge Pillar		
(1) Later production cars use 3/4" reach Auto-Lite AG-5 spark plug and Auto-Lite IBJ 4001-A distributor. IBJ distributor has maximum centrifugal advance of 32° @ 3700 rpm. Vacuum advance is 20°.		
(2) Distance between float and machined surface of bowl cover.		
(3) With overdrive total capacity is 4 pints. Ultramatic transmission requires 22 pints.		
(4) Weights shown include Ultramatic transmission.		
(5) 3.9 standard with overdrive. 3.07 standard with Ultramatic Drive.		
(6) 3.9 standard with overdrive. 3.23 standard with Ultramatic Drive.		



# PACKARD

CAR MODEL	Clipper Custom-5560	Packard-5580
ENGINE		
No. Cyl-Head Type .....	V-8-I	V-8-I
Bore and Stroke (in) .....	4.0x3.5	4.0x3.5
Displacement (cu in) .....	352	352
AMA Horsepower .....	51.2	51.2
Max Horsepower @ rpm .....	245 @ 4600	260 @ 4600 (1)
Max Torque, lb-ft @ rpm .....	355 @ 2400-2800	355 @ 2400-2800 (1)
Max bmep, lb/sq in .....	152.1	152.1
Head Material .....	Cast Iron	Cast Iron
Compression Ratio .....	8.5	8.5 (1)
Piston Material .....	AA	AA
Bearing Material .....	Steel Backed Babbitt(2)	
IGNITION		
Spark Plug—Factory Eqpt .....	Champ H-10	Champ H-10
Alternate .....	AC 45L, AL AL7	AC 45L, AL AL7
Spark Plug Gap .....	.033" to .037"	.033" to .037"
Firing Order .....	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Distributor—Make and Model...	DR 1110854	DR 1110854
Breaker Gap .....	.016"	.016"
Cam Angle .....	26° to 33°	26° to 33°
Timing—Crankshaft Degrees ...	5° BTC	5° BTC
Adv Deg—Centrif—Vac .....	31-20	31-20
Adv Begins—Ends—Eng rpm....	600-4000	600-4000
Battery—Volts, Terminal Ground	12, Positive	12, Positive
VALVES		
Size and Material .....	Int 1.94", Sil 1	1.94", Sil 1
Exh 1.69", 2112	Hydraulic Lifters, 30°	1.69", 2112
Tappet Clr—Seat Angle.....	Int	Hydraulic Lifters, 45°
Exh	Hydraulic Lifters, 45°	
Exhaust Seat Inserts.....	None	None
CARBURETOR		
Make, Model .....	Roch 4GC	Roch 4GC
Type .....	4 Barrel DD	4 Barrel DD
Float Level .....	1-5/8" (3)	1-5/8" (3)
Choke Control .....	Automatic	Automatic
CAPACITY		
Oil .....	(qt) 5 Refill	5 Refill
Water (includes heater).....	(qt) 26-1/2	27
Transmission .....	(pt) 3-1/4 (4)	22
Rear Axle .....	(pt) 4-1/4	4-1/4
Gasoline .....	(gal) 20	20
GENERAL DATA (Four-Door Sedan)		
Wheelbase .....	(in) 122	127
Over All Lgth Incl Bumpers (in)	214-13/16	217-7/16
Shipping Weight .....	(lb) 3980 (5)	4355 (5)
Tire Size—Recm Press.....	(lb) 7.60x15-24-24	8.00x15-24-24
Rear Axle Ratio .....	3.9 (6)	3.54
LOCATION CHASSIS SERIAL NO.		
Left Front Door Hinge Pillar		
(1) Packard Caribbean has 9.1 compression ratio, 275 bhp @ 4800 rpm, 3.55 lb-ft at 2400-3200 rpm engine.		
(2) No. 1, 2, 3 and 4 main bearings are copper-lead steel backed.		
(3) Distance between bottom of float and bowl cover gasket, bowl cover assembly inverted.		
(4) Total capacity 4 pints with overdrive. Ultramatic requires 22 pints.		
(5) Weights include Ultramatic transmission.		
(6) 3.9 standard with overdrive. 3.23 standard with Ultramatic Drive.		

# PONTIAC

CAR MODEL	55-27 Chieftain	55-28 Star Chief
<b>ENGINE</b>		
No. Cyl-Head Type	V-8-I	V-8-I
Bore and Stroke (in)	3-3/4 x 3-1/4	3-3/4 x 3-1/4
Displacement (cu in)	287.2	287.2
AMA Horsepower	45.0	45.0
Max Horsepower @ rpm	180 @ 4600(1)	180 @ 4600(1)
Max Torque, lb-ft @ rpm	264 @ 2400(1)	264 @ 2400(1)
Max bmep, lb/sq in	138.6 (1)	138.6 (1)
Head Material	Cast Iron	Cast Iron
Compression Ratio	8.0(1)	8.0(1)
Piston Material	AA	AA
Bearing Material		Steel Backed Durex
<b>IGNITION</b>		
Spark Plug—Factory Eqpt	AC 44-5	AC 44-5
Alternate		AL A5 or AR5, Champ J-8
Spark Plug Gap	.035"	.035"
Firing Order		1-8-4-3-6-5-7-2
Distributor—Make and Model	DR 1110828	DR 1110828
Breaker Gap	.016"	.016"
Cam Angle	26° to 33°	26° to 33°
Timing—Crankshaft Degrees	5° BTC	5° BTC
Adv Deg—Centrif—Vac	30-16	30-16
Adv Begins—Ends—Eng rpm	500-3400	500-3400
Battery—Volts, Terminal Ground	12, Negative	12, Negative
<b>VALVES</b>		
Size and Material	Int 1.78", SAE 3140 Exh 1.50", Sil XCR	1.78", SAE 3140 1.50", Sil XCR
Tappet Cir—Seat Angle	Int Hydraulic Lifters, 30° Exh Hydraulic Lifters, 45°	Hydraulic Lifters, 30° Hydraulic Lifters, 45°
Exhaust Seat Inserts	None	None
<b>CARBURETOR</b>		
Make, Model	Car WGD-2182S or RP	7006100 (Hydra-Matic)
Type	Dual DD	Dual DD
Float Level	(2)	(2)
Choke Control	Automatic	Automatic
<b>CAPACITY</b>		
Oil	(qt) 5 Refill	5 Refill
Water (includes heater)	(qt) 26	26
Transmission	(pt) 1-3/4 (3)	1-3/4 (3)
Rear Axle	(pt) 3-1/4	3-1/4
Gasoline	(gal) 20	20
<b>GENERAL DATA (Four-Door Sedan)</b>		
Wheelbase	(in) 122	124
Over All Lgth Incl Bumpers	(in) 203.2	210.2
Shipping Weight	(lb) 3511(4)	3556(4)
Tire Size—Recm Press.	(lb) 7.10 x 15-24-24(5)	7.10 x 15-24-24(5)
Rear Axle Ratio	3.64(6)	3.64(7)
<b>LOCATION CHASSIS SERIAL NO.</b>		
	Left Front Pillar	Post

- (1) Power data given for 8.0 compression ratio which is standard.  
An optional compression ratio of 7.4 is available for cars equipped with Synchronesh transmission. With 7.4 compression ratio 173 bhp @ 4400 rpm, 256 lb-ft @ 2400 rpm.
- (2) Carter: 7/32" from top of float to machined face of bowl cover.  
Rochester: 1-15/64" from bottom of float to bowl cover gasket.
- (3) Hydra-Matic transmission requires 9-1/2 quarts for refill.
- (4) 110 pounds additional when equipped with Hydra-Matic transmission.
- (5) 7.60x15 tires optional.
- (6) 3.08 standard with Hydra-Matic.
- (7) 3.23 standard with Hydra-Matic.

# STUDEBAKER

CAR MODEL	Champion 16G6	Commander 16G8	President 6H
ENGINE			
No. Cyl-Head Type .....	6-L	V-8-I	V-8-I
Bore and Stroke (in) .....	3 x 4-3/8	3-9/16x2-13/16	3-9/16x3-1/4
Displacement (cu in) .....	185.6	224.3	259.2
AMA Horsepower .....	21.6	40.6	40.6
Max Horsepower @ rpm .....	101 @ 4000	140 @ 4500	175 @ 4500
Max Torque, lb-ft @ rpm .....	152 @ 1800	202 @ 2800	250 @ 3000
Max bmep, lb/sq in .....	123.6	135.8	145.4
Head Material .....	Cast Iron	Cast Iron	Cast Iron
Compression Ratio .....	7.5	7.5	7.5
Piston Material .....	AA	AA	AA
Bearing Material .....		Steel Backed Babbitt	Lined
IGNITION			
Spark Plug—Factory Eqpt .....	Champ J-7	Champ H-11	Champ H-11
Alternate .....	AC 44, AL A5	AC 45L, AL AL7 or ARL 8	
Spark Plug Gap .....	.030"	.035"	.035"
Firing Order .....	1-5-3-6-2-4		1-8-4-3-6-5-7-2
Distributor—Make and Model ..	AL IAT4201		DR 1110839
Breaker Gap .....	.020"	.013"	.013"
Cam Angle .....	38° to 40°	28° to 34°	28° to 34°
Timing—Crankshaft Degrees ...	2° BTC	8° BTC	4° BTC
Adv Deg—Centrif—Vac .....	14-18	32-16	32-16
Adv Begins—Ends—Eng rpm....	800-2800	600-2900	600-2900
Battery—Volts, Terminal Ground	6, Positive	6, Positive	6, Positive
VALVES			
Size and Material .....	Int 1-11/32", CNS Exh 1-9/32", 2112	1-21/32", Sil 1 1-17/32", 2112N	1-21/32", Sil 1 1-17/32", 2112N
Tappet Clr—Seat Angle.....	Int .016" C, 45° Exh .016" C, 45°	.026" C, 45° .026" C, 45°	.026" C, 45° .026" C, 45°
Exhaust Seat Inserts.....	None	None	None
CARBURETOR			
Make, Model .....	Car WE 2108-S	Strom WW	Car WCFB-2219-S(1)
Type .....	Sgl DD	Dual DD	DD 4 Barrel
Floater Level .....	3/8"(2)	(3)	(3)
Choke Control .....	Automatic	Automatic	Automatic
CAPACITY			
Oil .....	(qt) 5 Refill	6 Refill	6 Refill
Water (includes heater)....	(qt) 11-1/2	18-3/4	18-3/4
Transmission .....	(pt) 1.6(4)	2.4(4)	2.4(4)
Rear Axle .....	(pt) 2.5	2.5	3
Gasoline .....	(gal) 18	18	18
GENERAL DATA (Four-Door Sedan)			
Wheelbase .....	(in) 116-1/2(5)	116-1/2(5)	120-1/2
Over All Lgth Incl Bumpers (in)	202-1/4(6)	202-1/4(6)	206-1/4(6)
Shipping Weight .....	(lb) 2790	3065	3165
Tire Size—Recm Press.....	(lb) 6.40 x 15-26-24	6.70 x 15-26-22	7.10 x 15-26-22
Rear Axle Ratio.....	4.10(7)	4.10(8)	3.92(8)
LOCATION CHASSIS SERIAL NO.			
	Left	Front Door	Hinge Pillar Post
(1) Carter WCFB-2214-S used with automatic transmission.			
(2) Between boss on bowl cover and far edge of float seam.			
(3) Use gage J-5475 on Commander and J-5458 on President. Bend arms of float so that float just clears gage.			
(4) 2.75 with overdrive on Champion, 3.4 with overdrive on V-8's. Automatic transmission requires 9.5 quarts.			
(5) 120-1/2" wheelbase for all 2-door coupes, including hardtops.			
(6) Over all length for all 2-door coupes 204-7/16".			
(7) 4.56 with overdrive, 3.54 with automatic transmission.			
(8) 4.27 with overdrive, 3.54 with automatic transmission.			



# WILLYS

## CAR MODEL

6-226-A

## ENGINE

No. Cyl-Head Type	6-L
Bore and Stroke (in)	3-5/16x4-3/8
Displacement (cu in)	226.2
AMA Horsepower	26.33
Max Horsepower @ rpm	115 @ 3650
Max Torque, lb-ft @ rpm	190 @ 1800
Max bmep, lb/sq in	126.6
Head Material	Cast Iron
Compression Ratio	7.3
Piston Material	AA
Bearing Material	Steel Backed Babbitt

## IGNITION

Spark Plug—Factory Eqpt	Champ J-8
Alternate	AC 45, AL A7
Spark Plug Gap	.030"
Firing Order	1-5-3-6-2-4
Distributor—Make and Model	AL IAT 4206
Breaker Gap	.020"
Cam Angle	39° + 3°
Timing—Crankshaft Degrees	4° BTC
Adv Deg—Centrif—Vac	18-10
Adv Begins—Ends—Eng rpm	650-3350
Battery—Volts, Terminal Ground	6, Negative

## VALVES

Size and Material	Int 1.52", Silchrome 1
	Exh 1.33", XCR
Tappet Ctr—Seat Angle	Int .014" C, 30°
	Exh .014" C, 45°
Exhaust Seat Inserts	None

## CARBURETOR

Make, Model	Car WGD 2052-SA
Type	Dual DD
Float Level	1/4" (1)
Choke Control	Automatic

## CAPACITY

Oil	(qt) 5 Refill
Water (includes heater)	(qt) 14
Transmission	(pt) 2-1/2 (2)
Rear Axle	(pt) 2-1/2
Gasoline	(gal) 19

## GENERAL DATA (Four-Door Sedan)

Wheelbase	(in) 108
Over All Lgth Incl Bumpers	(in) 189.9
Shipping Weight	(lb) 2778
Tire Size—Recm Press	(lb) 6.40x15-24-24
Rear Axle Ratio	3.54 (3)

## LOCATION CHASSIS SERIAL NO.

Left Front Door Pillar

- (1) From top of float to bottom surface of float bowl cover with gasket removed.
- (2) One pint additional with overdrive. 22 pints with Hydramatic transmission.
- (3) 4.1 with overdrive, 3.31 with Hydramatic transmission.



# APPROXIMATE ANALYSIS OF VALVE, VALVE FACING AND SEAT INSERT MATERIALS IN GENERAL USE

ELEMENT	EXHAUST VALVE STEELS				INTAKE VALVE STEELS			
	SIL 1 <sup>1</sup>	SIL XB <sup>1</sup>	XCR <sup>2</sup>	XCR MOD <sup>2</sup>	SIL 10 <sup>3</sup>	SIL XB <sup>3</sup>	FORD B-312 <sup>3</sup>	SAE 9442 <sup>3</sup>
CHROMIUM (CR)	8.5	21.0	2.3	2.3	19.0	14.0	15.0	21.0
NICKEL (NI)	—	1.5	4.7	3.7	12.0	8.0	15.0	2.2
CARBON (C)	0.45	0.75	0.45	0.38	0.25	0.38	0.60	0.60
SILICON (SI)	3.2	2.0	1.0 MAX	0.8	2.8	0.6	3.5	0.5 MAX
MANGANESE (MN)	—	0.4	1.0 MAX	3.7	1.4	1.0	0.7	0.8
MOLYBDENUM (MO)	—	—	2.7	1.3	—	0.5 MAX	0.4	—
TUNGSTEN (W)	—	—	—	—	—	—	—	—
OTHER	—	—	—	—	—	—	—	—
IRON (FE)	BAL	BAL	BAL	BAL	BAL	BAL	BAL	BAL

## FACING MATERIALS

ELEMENT	STELLITE STELLITE <sup>4</sup>				NICHROME <sup>4</sup>			
	NO. 6	F	EATONITE <sup>4</sup>	X-702 <sup>4</sup>	(BRIGHTRAY)	%	%	%
CHROMIUM (CR)	27.0	24.0	29.0	26.0	20.0	—	—	—
NICKEL (NI)	—	24.0	39.0	BAL	BAL	—	—	—
CARBON (C)	1.25	1.60	2.40	2.00	0.20	—	—	—
SILICON (SI)	2.7	1.3	1.0 MAX	0.4	0.3 MAX	—	—	—
MANGANESE (MN)	—	0.3	—	0.5 MAX	0.8	—	—	—
MOLYBDENUM (MO)	—	—	—	—	—	—	—	—
TUNGSTEN (W)	4.0	12.5	15.0	9.0	—	—	—	—
COBALT (CO)	63.0	37.0	10.0	10 MAX	—	—	—	—
OTHER	—	—	—	—	—	—	—	—
IRON (FE)	2.0	0.7	8.0 MAX	4.0 MAX	10 MAX	—	—	—

NOTES: 1. FERRITIC OR MARTENSITIC (MAGNETIC)

2. SIGMA PHASE (SLIGHTLY MAGNETIC)

3. AUSTENITIC (NON MAGNETIC)

4. NON FERROUS ALLOY (NON MAGNETIC)

5. CAST IRON (MAGNETIC)

\* ZINC HAS SAME COMPOSITION WITH 0.10 TO 0.20% NITROGEN

\*\* FORMERLY NATIONAL EMERGENCY STEEL WITH PREFIX "NE" INSTEAD OF "SAE"

## SEAT INSERT MATERIALS

ELEMENT	STELLITE <sup>4</sup>				CHROME-MOLY <sup>4</sup>			
	NO. 6	F	EATONITE <sup>4</sup>	HARD CL <sup>4</sup>	%	%	%	%
CHROMIUM (CR)	27.0	24.0	29.0	3.0	5.2	3.5	21.0	3.0
NICKEL (NI)	—	24.0	39.0	—	—	—	1.5	—
CARBON (C)	1.25	1.60	2.40	2.20	100	0.55	0.75	0.65
SILICON (SI)	2.7	1.3	1.0 MAX	1.8	0.4	0.2	2.0	1.0
MANGANESE (MN)	—	0.3	—	0.6	0.5	0.3 MAX	0.4	0.6
MOLYBDENUM (MO)	—	—	—	3.5	1.3	—	—	5.0
TUNGSTEN (W)	4.0	12.5	15.0	—	—	14.0	—	—
COBALT (CO)	63.0	37.0	10.0	—	—	—	—	—
OTHER	—	—	—	—	—	—	—	—
IRON (FE)	2.0	0.7	8.0 MAX	BAL	BAL	BAL	BAL	BAL

ETHYL CORPORATION

## AUTOMATIC AND SEMI-AUTOMATIC TRANSMISSIONS

### Overdrive (Borg Warner Corporation)

Available on Chevrolet, DeSoto, Dodge, Ford, Hudson, Kaiser, Mercury, Nash, Packard, Plymouth, Studebaker and Willys. It consists of a planetary gearset and one-way clutch used behind a conventional three-speed transmission. The shift is controlled electrically according to car speed and is actuated by the accelerator. The driving ratio reduction is 30%.

### Hydra-Matic (Detroit Transmission Division GMC)

Available on Cadillac, Hudson, Kaiser, Nash, Oldsmobile, Pontiac and Willys. This transmission consists of a fluid coupling with three planetary gearsets providing four forward speeds and reverse. The shifts are automatic and vary with car speed and accelerator position. Ratios are as follows: first, 3.82:1; second, 2.63:1; third, 1.45:1; fourth, 1:1, for all cars except Cadillac and Pontiac. Cadillac and Pontiac ratios are as follows: first, 4.08:1; second, 2.63:1; third, 1.55:1; fourth, 1:1.

### Dynaflow (Buick)

The Dynaflow transmission consists of a four-element torque converter and a multiple pinion planetary gearset providing low and reverse ratios. The two turbine elements of the converter are interconnected through a planetary gearset of 1.6:1 ratio. The stator vanes are pivoted in the vane carrier and their pitch is controlled by a hydraulic piston in response to accelerator position. The maximum torque multiplication of the converter is 2.5 in the high stator pitch and 2.1 in the low pitch position. No additional gearing, other than the internal gearing between the turbines, is used for normal forward driving. The drive is always through the converter. Low range 1.82:1 gear ratio can be manually engaged at any throttle position for extra pulling power and engine braking.

### Ultramatic (Packard, Nash V-8 and Hudson V-8)

This transmission is composed of a four-element torque converter (one pump, two turbine members and a stator), a multiple pinion planetary transmission to provide low and reverse, and a direct drive clutch. The maximum torque multiplication of the converter is 2.9:1 and it is used only for accelerating. Normal drive with the selector in the right drive position starts through the torque converter and low gear ratio (1.82:1), automatically shifts to torque converter only and then the pump and turbine are locked together by the direct drive clutch into a solid direct drive. With the selector in the left drive position the transmission starts through the converter only and then locks-up into direct drive. The shift from low to direct and the clutch lock-up is controlled automatically by the car speed and accelerator position. Low range can be manually engaged for extra power or engine braking.

### Powerglide (Chevrolet)

This transmission consists of a three-element torque converter with a multiple pinion planetary gearset providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and low gear ratio (1.82:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

### Studebaker Automatic Transmission

This transmission has a three-element torque converter, a direct drive clutch and two planetary gearsets providing three forward speeds and reverse. In the Champion and President cars normal drive starts through the torque converter in low gear, shifts to intermediate gear ratio and torque converter and then shifts to solid direct drive depending on car speed and throttle opening. In the Commander the drive starts through the torque converter in intermediate gear and shifts to solid direct drive. Low range can be manually engaged for extra pulling power or engine braking. The torque converter has a maximum ratio of 2.15 and the gear ratios are as follows: first, 2.31:1; second, 1.43:1, third, 1:1.

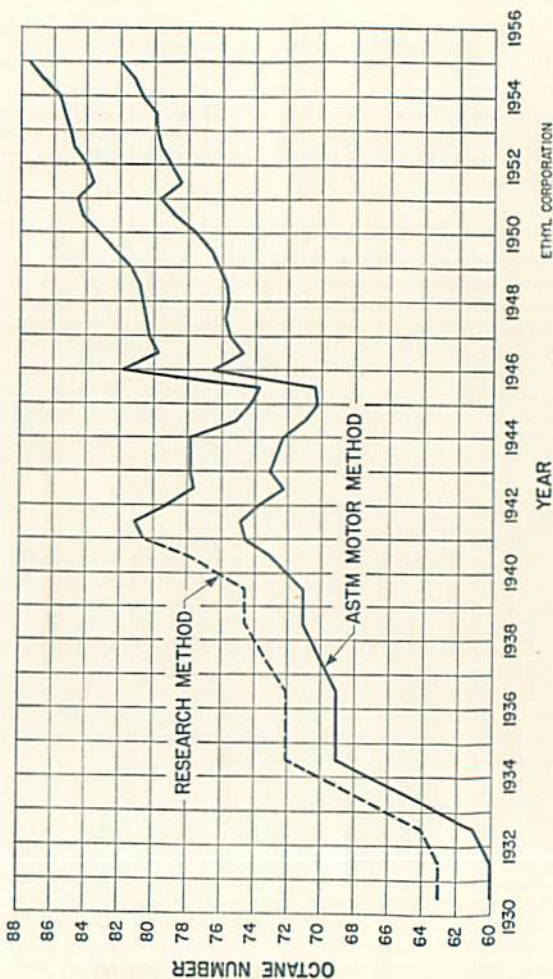
### Fordomatic, Merc-O-Matic and Turbo-Drive (Ford, Mercury and Lincoln)

This transmission is composed of a three-element torque converter and a multiple pinion planetary gear system to produce three forward speeds and reverse. The drive is always through the converter which has a maximum torque multiplication of 2.1:1. Normal drive starts through the torque converter and intermediate gear ratio (1.47:1) and automatically shifts to converter only, depending on throttle opening and car speed. Low gear (2.40:1 gear ratio) can be engaged for added acceleration from a standstill or from low vehicle speeds by depressing the accelerator to the floor. The transmission may be manually locked in low range for added pulling power or engine braking.

### PowerFlite (Chrysler Corporation)

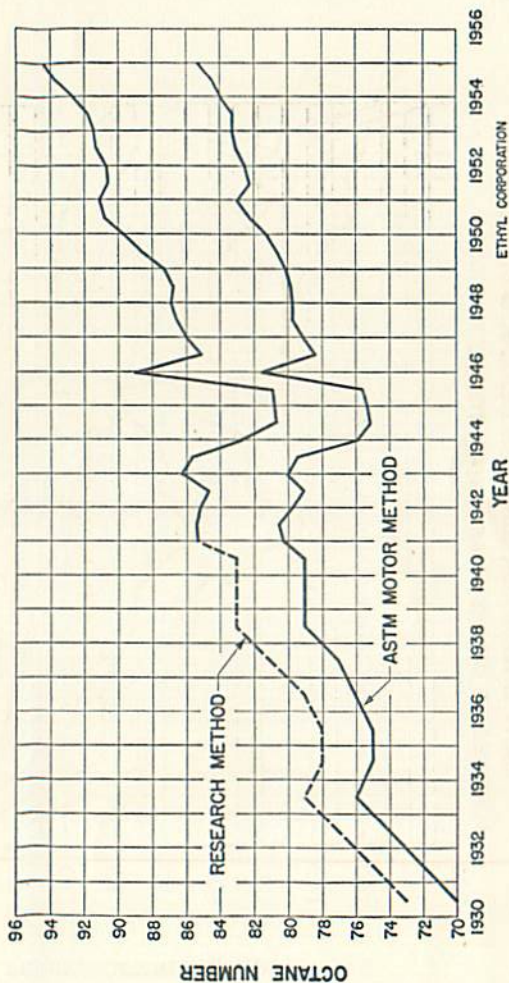
This transmission is used on Chrysler, DeSoto, Dodge and Plymouth in both V-8 and six-cylinder cars. It consists of a four-element torque converter and two planetary gearsets providing low and reverse ratios. The drive is always through the converter which has a maximum torque multiplication of 2.6:1. Normal drive starts through the torque converter and low gear ratio (1.72:1) and automatically shifts to converter only, depending on throttle opening and car speed. The transmission can be manually locked in low range for extra pulling power and engine braking.

# TREND IN ANTIKNOCK QUALITY OF REGULAR GASOLINES SOLD IN THE UNITED STATES





# TREND IN ANTIKNOCK QUALITY OF PREMIUM GASOLINES SOLD IN THE UNITED STATES



# TRENDS OF AMERICAN PASSENGER CAR ENGINE DESIGN SINCE 1925

AVERAGES OF VALUES LISTED IN TRADE PUBLICATIONS

